



**International  
Standard**

**ISO 24131-4**

**Internal protection by polymeric  
lining for ductile iron pipes —  
Requirements and test methods —**

**Part 4:  
Ceramic epoxy lining**

*Protection interne des tuyaux en fonte ductile par revêtement  
polymérique — Exigences et méthodes d'essai —*

*Partie 4: Revêtement époxy céramique*

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 5, *Ferrous metal pipes and metallic fittings*, Subcommittee SC 2, *Cast iron pipes, fittings and their joints*.

A list of all parts in the ISO 24131 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

# Internal protection by polymeric lining for ductile iron pipes — Requirements and test methods —

## Part 4: Ceramic epoxy lining

### 1 Scope

This document specifies the requirements and test methods applicable to factory applied ceramic epoxy lining for ductile iron pipes conforming to ISO 2531, ISO 7186 and ISO 16631, excluding potable water, for operating temperature up to 50 °C.

### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 2531, *Ductile iron pipes, fittings, accessories and their joints for water applications*

ISO 7186, *Ductile iron products for sewerage applications*

ISO 16631, *Ductile iron pipes, fittings, accessories and their joints compatible with plastic (PVC or PE) piping systems, for water applications and for plastic pipeline connections, repair and replacement*

ISO 4624, *Paints and varnishes — Pull-off test for adhesion*

ISO 8503-1, *Preparation of steel substrates before application of paints and related products — Surface roughness characteristics of blast-cleaned steel substrates — Part 1: Specifications and definitions for ISO surface profile comparators for the assessment of abrasive blast-cleaned surfaces*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 2531 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

#### 3.1 ceramic epoxy lining

factory applied lining which consists of at least 20% by volume of ceramic quartz, and the lining material is two-component amine cured epoxy which is mixed together in the proportion specified by the manufacturer before application

#### 3.2 routine test

test carried out to control the manufacturing process

Note 1 to entry: The frequency of the test is defined by this document or the manufacturer.